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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/696,480 | 10/28/2003 | Joseph Leon | | 6912 |

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EXAMINER

OLSON, LARS A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3617

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/696,480

Applicant(s)

LEON, JOSEPH

Examiner

Lars A Olson

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 18-22, 24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 18-22, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. An amendment was received from the applicant on July 26, 2004.
2. Claims 16, 17 and 23 have been canceled.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al. (US 3,908,902) in view of Potter (US 4,150,790).

Collins et al. discloses a structural member, as shown in Figures 1-3, that is comprised of a mixture of a wood product that is chemically treated with creosote and a thermoplastic, as described in lines 28-45 and 60-65 of column 1, where said mixture is comprised by weight of 10-70% thermoplastic and 30-90% wood product, as described in lines 20-50 of column 2, and said mixture is compressed and heated in a mold, as described in lines 51-53 of column 2.

Collins et al., as set forth above, discloses all of the features claimed except for the use of a reinforcing member that is disposed in a mold prior to the addition of a mixture of processed wood product and thermoplastic material, said reinforcing member being from the group of a tire strip, a rebar, a wire and a railroad rail.

Potter discloses a structural member, as shown in Figures 1 and 2, that is molded from a mixture of a wood product that is chemically treated with creosote, defined as Part #22, as described in lines 1-15 of column 2, and a thermoplastic binder material, as described in lines 1-6 of column 5, around a plurality of reinforcing elements, defined as Parts #26 and 28, in the form of elongate metal rods that are placed in a mold prior to the addition of said mixture into said mold, as described in lines 6-32 of column 5, where said mixture and said reinforcing elements are heated and compressed in said mold in order to form said structural member, defined as Part #24.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a structural member that is molded around a plurality of reinforcing elements, as taught by Potter, in combination with the structural member as disclosed by Collins et al. for the purpose of providing a molded structural member with increased strength and rigidity.

5. Claims 1-13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al. in view of Potter, and further in view of Neefe (US 5,055,350).

Collins et al. also discloses a method for the manufacture of railroad ties or structural members from existing wood and thermoplastic products and materials, that is comprised of the steps of selecting a wood product that has been chemically treated, processing said wood product in a grinder, as described in lines 60-65 of column 1, in order to form chemically treated wood particles, selecting a thermoplastic material, mixing said chemically treated wood particles and said thermoplastic material to form a

mixture, as shown in Figure 2, processing said mixture in a processor to further mix and heat said mixture, as shown in Figure 2, processing said mixture in an extruder to compress and heat said mixture in order to form a molten mixture, as shown in Figure 2, placing said molten mixture into a mold to form a structural member, as described in lines 3-6 of column 2, and removing said structural member from said mold after cooling. Said wood product used may be a waste product such as old or used railroad ties, bark, or chips produced from milling. A fire retardant substance may also be added to said mixture during said mixing step, as described in lines 35-37 of column 1.

Collins et al. in combination with the teachings of Potter shows all of the features claimed except for a method step of processing a thermoplastic in a chipper to form thermoplastic particles, where said thermoplastic is a waste material composed of polyethylene or polypropylene.

Neeffe discloses a composite railroad cross-tie, as shown in Figure 1, and a method for making said cross-tie that includes using recycled thermoplastic containers made from polyethylene or polypropylene that are granulated, as described in lines 49-52 of column 2, and mixed with other materials, as described in lines 10-17 of column 3, before being molded into a composite railroad cross-tie.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize granulated thermoplastic from recycled thermoplastic containers in the making of a composite structural member or railroad cross-tie, as taught by Neeffe, in combination with the method for the manufacture of structural members from existing wood and thermoplastic products and materials as disclosed by

Collins et al. and the teachings of Potter for the purpose of providing a method for manufacturing a structural member from inexpensive materials such as waste wood products and recycled thermoplastic products.

6. Claims 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al. in view of Potter and Neefe, and further in view of Brown (US 4,095,985).

Collins et al. in combination with the teachings of Potter and Neefe shows all of the features claimed except for the method step of adding sodium bicarbonate in the amount of 1-3% by weight to said mixture.

Brown discloses a method for fireproofing flammable structural surfaces that includes the use of a mixture containing about 2% by weight of sodium bicarbonate, as described in lines 11-17 of column 2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to add sodium bicarbonate to a mixture for treating flammable structural materials, as taught Brown, in combination with the method for the manufacture of structural members from existing wood and thermoplastic products and materials as disclosed by Collins et al. and the teachings of Potter and Neefe for the purpose of adding a fire retardant substance in the form of sodium bicarbonate to a mixture for forming a composite structural member made from recycled wood materials in order to reduce the flammability of said structural member.

7. Claims 15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al. in view of Potter and Neeffe, and further in view of Nosker et al. (US 6,191,228).

Collins et al. in combination with the teachings of Potter and Neeffe shows all of the features claimed except for the method step of adding an ultraviolet protection material in the amount of 1-4% by weight to said mixture.

Nosker et al. discloses a method for using recycled plastic material in the formation of composite railroad ties, said method including the addition of ultraviolet resistant agents to a composite mixture for forming a railroad tie, as described in lines 7-10 of column 8.

The use of an ultraviolet protection material in a specific percentage by weight of a composite mixture would be considered by one of ordinary skill in the art to be a design choice based upon the desired magnitude of ultraviolet protection for the member formed by said composite mixture.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to add an ultraviolet protection material to a composite mixture for forming a railroad tie, as taught by Nosker et al., in combination with the method for the manufacture of structural members from existing wood and thermoplastic products and materials as disclosed by Collins et al. and the teachings of Potter and Neeffe for the purpose of adding an ultraviolet protection material to a mixture for forming a composite structural member made from recycled wood materials in order to increase the resistance of said structural member to damage caused by ultraviolet radiation.

8. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins et al. in view of Potter and Neeffe, and further in view of Brown and Nosker et al.

Collins et al. in combination with the teachings of Potter and Neeffe shows all of the features claimed except for method step of adding sodium bicarbonate in the amount of 1-3% by weight to said mixture, and the method step of adding an ultraviolet protection material in the amount of 1-4% by weight to said mixture.

Brown, as previously cited, discloses a method for fireproofing flammable structural surfaces that includes the use of a mixture containing about 2% by weight of sodium bicarbonate, as described in lines 11-17 of column 2.

Nosker et al., as cited previously, discloses a method for using recycled plastic material in the formation of composite railroad ties, said method including the addition of ultraviolet resistant agents to a composite mixture for forming a railroad tie, as described in lines 7-10 of column 8.

The use of an ultraviolet protection material in a specific percentage by weight of a composite mixture would be considered by one of ordinary skill in the art to be a design choice based upon the desired magnitude of ultraviolet protection for the member formed by said composite mixture.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to add sodium bicarbonate to a mixture for treating flammable structural materials, as taught Brown, and to add an ultraviolet protection material to a composite mixture for forming a railroad tie, as taught by Nosker et al., in combination

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with the method for the manufacture of structural members from existing wood and thermoplastic products and materials as disclosed by Collins et al. and the teachings of Potter and Neefe for the purpose of providing a stronger and stiffer composite railroad tie with increased resistance to fire damage and damage caused by ultraviolet radiation.

Response to Arguments

9. Applicant's arguments with respect to claims 1-15, 18-22, 24 and 25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication from the examiner should be directed to Exr. Lars Olson whose telephone number is (703) 308-9807.

lo

September 10, 2004

LARS A. OLSON
PATENT EXAMINER

Lars Olson
9/10/04